

Appl. No. 09/852,322
Docket No.: H1799-00071
Reply to Office Action of July 7, 2005

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. -8. (Cancelled)

9. (Currently Amended) A heat pipe for spreading heat according to claim 14[[8]] comprising at least one spacer positioned within said vapor chamber and extending between and contacting said first and second plates.

10. (Currently Amended) A heat pipe for spreading heat according to claim 14[[8]] wherein said spaced-apart first and second plates include confronting interior surfaces; and

a wick positioned upon said confronting interior surfaces including that portion of the interior surface of said first plate that forms a surface of said depression within said vapor chamber.

11. (Currently Amended) A heat pipe for spreading heat according to claim 14 [[10]] wherein said wick is constructed with at least two separate sections of different materials, with one section being located on said first plate interior surface and being formed of a material with higher heat conductivity than sections located on said second plate interior surface.

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12. (Currently Amended) A heat pipe for spreading heat according to claim 14[[8]] wherein said depression comprises an annular outer surface that is brazed ~~bonded~~ to a corresponding annular edge surface in said second plate.

13. (Currently Amended) A heat pipe for spreading heat according to claim 14[[8]] wherein said first and second plates each include a peripheral lip located at an edge of said boundary structure at which said peripheral lip of said first plate is sealingly bonded to said peripheral lip of said second plate are bonded together.

14. (Currently Amended) A heat pipe for spreading heat comprising:
a boundary structure including spaced-apart first and second plates that define an enclosed vapor chamber;
at least one depression formed in said first plate which projects into said vapor chamber and is sealingly bonded to said second plate so as to form a bonded region;

an opening defined through said bonded region wherein the perimeter of said opening is defined within a portion of said bonded region such that first plate depression and said second plate wherein said opening is isolated from said vapor chamber; and

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at least one depression formed in said second plate which projects into said vapor chamber and is sealingly bonded to said first plate.

15. (Previously Presented) A heat pipe for spreading heat according to claim 14 wherein said at least one depression formed in said second plate comprises a flat portion that is in contact with an inner surface of said first plate.

16. (Previously Presented) A heat pipe for spreading heat according to claim 14 wherein said spaced-apart first and second plates include confronting interior surfaces; and

a wick positioned upon said confronting interior surfaces including that portion of the interior surface of said first plate that forms a surface of said depression within said vapor chamber.

17. (Currently Amended) A heat pipe for spreading heat comprising:
a boundary structure including spaced-apart first and second plates that define an enclosed vapor chamber;

at least one hollow column having an exterior surface positioned within said vapor chamber with a first portion of said exterior surface and sealingly bonded to at least one of said first and second plates, and having an open first end that opens through said first plate and an open second end that opens

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through said second plate so as to form at least one mounting hole that is isolated from said vapor chamber.

18. (Currently Amended) A heat pipe for spreading heat according to claim 17 wherein said spaced-apart first and second plates include confronting interior surfaces; and

a wick positioned upon said confronting interior surfaces of said first and second plates and having a second portion of said the exterior surface of said at least one hollow column disposed within said vapor chamber.

19. (Currently Amended) A heat pipe for spreading heat comprising:

a boundary structure including a first plate and a second plate arranged in spaced apart relation, each of said plates including interior confronting surfaces and a peripheral lip located at an edge of said boundary structure at which said peripheral lip of said first plate is sealingly bonded to said peripheral lip of said second plate ~~are bonded together~~ so as to define an enclosed vapor chamber;

at least one depression formed in said first plate which projects into said vapor chamber, is spaced from said peripheral lip of said first plate, and is sealingly bonded to said second plate so as to form a bonded region;

an opening defined through said first plate depression and said second plate wherein said depression comprises an annular outer surface that is sealingly bonded to a corresponding annular edge surface in said second plate

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and further wherein the perimeter of said opening is defined within a portion of said bonded region such that said opening is isolated from said vapor chamber;

at least one spacer extending between and contacting said first and second plates; and

a wick positioned upon said confronting interior surfaces including that portion of the interior surface of said first plate that forms a surface of said depression within said vapor chamber.

20. (Currently Amended) A heat pipe for spreading heat comprising:

a first plate having a circumferential edge lip bounding an inner surface and at least one hollow column that is integral with said first plate and which projects outwardly relative to said inner surface;

a second plate arranged in spaced apart confronting relation to said first plate and including a circumferential edge lip bounding an inner surface and at least one opening through said second plate, said edge lips of said first and second plates being sealingly bonded together so as to define a vapor chamber; wherein

said at least one hollow column being sealingly bonded at one end to said second plate so as to coaxially align said at least one hollow column with said at least one opening in said second plate thereby to form a mounting hole that extends through said first plate and said second plate and is isolated from said vapor chamber.

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21. (Currently Amended) A heat pipe for spreading heat comprising:

a first plate having a circumferential edge lip bounding an inner surface and at least one depression which projects outwardly relative to said inner surface;

a second plate arranged in spaced apart confronting relation to said first plate and including a circumferential edge lip bounding an inner surface and at least one opening through said second plate, said edge lips of said first and second plates being sealingly bonded together so as to define a vapor chamber; wherein

said at least one depression has an open ended tubular cross-section and an outer surface, a portion of which outer surface is sealingly bonded to said second plate so as to coaxially align said at least one depression with said at least one opening in said second plate thereby to form a mounting hole that extends through said first plate depression and said second plate and is isolated from said vapor chamber.

22. (Currently Amended) A heat pipe for spreading heat comprising:

a first plate having a circumferential edge lip bounding an inner surface and at least one depression which projects outwardly relative to said inner surface;

a second plate arranged in spaced apart confronting relation to said first plate and including (i) a circumferential edge lip bounding an inner surface, (ii) at

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least one depression which projects into said vapor chamber and that is sealingly bonded to said inner surface of said first plate, and (iii) at least one opening through said second plate, said edge lips of said first and second plates being sealingly bonded together so as to define a vapor chamber; wherein

said at least one depression in said first plate has a tubular cross-section that opens at a first end and a second end and is sealingly bonded to said second plate at said second end so as to coaxially align said at least one first plate depression with said at least one opening in said second plate thereby to form a mounting hole that extends through said first plate depression and said second plate and is isolated from said vapor chamber.